DOCUMENT RESUME

ED 403 273 TM 025 944

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TITLE To Change or Not To Change: The Multiple Choice Dilemma.
PUB DATE Jun 94
NOTE 10p.; Paper presented at the Annual Institute of the American Psychological Society on the Teaching of Psychology (Washington, DC, June 1994).
PUB TYPE Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Community Colleges; *Guessing (Tests); *Multiple Choice Tests; *Responses; Testing Problems; *Test Items; Test Wiseness; Two Year Colleges; *Two Year College Students
IDENTIFIERS *Answer Changing (Tests); Choice Behavior

ABSTRACT

Study skills books sometimes give conflicting advice concerning whether or not students should change their initial responses to multiple-choice questions about which they are unsure. In contrast, answer-changing research consistently shows that the majority of answer changes are from wrong to right. Responses of 244 community college students to 38,800 multiple-choice items were examined to determine the percentage of responses changed from wrong to right, right to wrong, and wrong to wrong. Results show that more responses were changed from wrong to right than from right to wrong or from wrong to wrong. For the 3 courses studied, 56% of changes were from wrong to right, with 24% from right to wrong, and 20% from wrong to another wrong answer. Change percentages were rather consistent among the three courses. (Contains one table and seven references.) (SLD)

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To Change or Not To Change: The Multiple-Choice Dilemma

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Presented at the 1st APS Annual Institute on the Teaching of Psychology, Washington, DC, June 1994.

TM 025944

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Abstract

Study skills books sometimes give conflicting advice concerning whether or not students should change their initial responses to multiple-choice questions they are unsure about. In contrast, answer-changing research consistently shows that the majority of answer changes are from wrong to right. Community college students' responses to 38,800 multiple-choice items were examined to determine the percentage of responses changed from wrong to right, right to wrong, and wrong to wrong. Results showed that a larger percentage of responses was changed from wrong to right than either from right to wrong or from wrong to wrong.

To Change or Not To Change: The Multiple-Choice Dilemma

"I had the right answer, but I changed it." How often have you heard this tale of woe from students as you reviewed the answers to a multiple-choice test? And how often have you been tempted to reply "Don't change your answers; stick with your first response"?

I have often heard that if one is unsure about an answer to a multiple-choice question, it is best to stay with the first impression. Furthermore, "eyeballing" students' answer sheets has led me to believe that far too many responses are changed from right answers to wrong answers. As a community college psychology instructor, however, I have been hesitant to offer test-taking advice to students without documentation.

I checked several study skills books in the campus library to find out what advice they provide for students taking multiple-choice tests. Most of the books agreed that if one is unsure about the answer to a multiple-choice question, caution should be exercised in changing answers because the first response is often the correct response (Apps, 1982; Crow & Crow, 1963; Deese & Deese, 1979). On the other hand, Feder (1979) refered to this type of advice as "bull-session wisdom." He argued that one should not be afraid to change an answer

if there is some doubt about the first response; many studies show that more answers are changed from wrong to right than from right to wrong. Indeed, over 60 years of answer-changing research uniformly indicates that the majority of answer changes are from wrong to right (cf. Benjamin, Cavell, & Shallenberger, 1984; Mueller & Wasser, 1977).

Paradoxically, there is a widespread belief that students should not change their initial responses to multiple-choice questions, yet the evidence consistently shows that answer-changing has the potential to improve students' test scores. This study examined the direction in which my students changed their answers on multiple-choice tests.

Method

Subjects

The subjects were 244 community college students enrolled in Introductory Psychology, Child Development, and Adult Development classes from 1989 to 1991.

Materials

Multiple-choice questions given on in-class examinations were used. All questions consisted of four alternatives. The total number of multiple-choice questions included in this study was 38,800. There were 23,750 items from Introductory Psychology exams, 14,500

from Child Development exams, and 550 from Adult Development exams.

Procedure

Students recorded their responses in pencil on Scantron answer sheets. All answer sheets were optically scored such that the correct answer appeared to the right of each item. The scored answer sheets were then carefully examined for erasure marks. Each response that had been detectably changed was tallied according to one of three categories: wrong to right, right to wrong, or wrong to wrong. Questionable erasures were not included in the tally procedure.

Results

As indicated in Table 1, only a small percentage of the total number of items was changed. This finding is highly consistent with the proportion of changed answers in previous studies. The average number of responses changed in the answer-changing literature is around 3% (cf. Benjamin et al., 1984; Mueller & Wasser, 1977).

Insert Table 1 about here

Further examination of Table 1 shows that among those items that were changed, a larger percentage of responses was changed from wrong to right than either

from right to wrong or from wrong to wrong. Even when all responses changed to a wrong answer are combined, changing from wrong to right still maintains a slight edge. Moreover, percentages across the three courses are highly consistent. This pattern of results closely approximates that found in the extant answer-changing literature (cf. Benjamin et al., 1984; Mueller & Wasser, 1977). Clearly, research indicates that answer changes are more often from wrong to right than from right to wrong (Hopkins, Stanley, & Hopkins, 1990).

Discussion

These findings support Feder's (1979) claim that staying with an initial response simply because first impressions are probably correct may in fact be nothing more than "bull-session wisdom." Many years of answer-changing research has consistently shown the preponderance of answer changes to be from wrong to right, thus, suggesting that students who change their answers are likely to improve their test scores.

In light of this remarkable consistency, Hopkins et al. (1990) proclaimed that the "changed-answer" myth should finally be dispelled. The odds are in the students' favor when they change an answer they really believe may be wrong to one they really believe may be correct.

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Author Notes

1. I thank Richard Hamilton for his helpful comments a draft of this article.

Table 1.

Frequencies and Percentages of Changed Multiple-Choice Responses

	Items		W-R		R-W		W-W	
Course	f	%	f	%	f	%	f	%
Introductory Psychology								
	882	4	518	59	190	22	174	20
Child Development								
	433	3	221	51	123	28	89	21
Adult Development								
	40	7	21	53	9	23	10	25
All Courses								
	1355	3	760	56	322	24	273	20

Note. W-R = changed from wrong answer to right answer; R-W = changed from right answer to wrong answer; W-W = changed from wrong answer to wrong answer.